

Chapter - 2

Audit Framework

2.1 Scope of Audit

The Performance Audit covers all activities from conceptualisation to implementation of selected major transmission projects executed by PGCIL between April 2012 and March 2017 along with the status of augmentation to the transmission network by PGCIL.

2.2 Audit objectives

Audit objectives of the Performance Audit were to assess:

- (i) whether transmission plans for projects of all types (generation linked, grid strengthening, inter-regional and green corridors⁸) were optimal, adequate and in line with National Electricity Policy,
- (ii) whether the projects were executed economically, efficiently and effectively, and
- (iii) the impact of investment on improvement of national transmission grid capacities.

2.3 Audit criteria

The Audit criteria adopted for the performance audit are:

- (i) Electricity Act, 2003;
- (ii) National Electricity Policy, 2005;
- (iii) National Electricity Plan and Perspective Plan;
- (iv) Tariff Policy, 2006, subsequent amendments and revisions;
- (v) Regulations issued by the Central Electricity Regulatory Commission (CERC) relating to transmission;
- (vi) XII Plan documents and Report of the Working Group on Power for the XII plan;
- (vii) Decision of the Board of Directors and Sub-committees of Board level;
- (viii) Decision of Standing Committee for power system planning, Regional Power Committees (RPC) and Project Review Meetings;
- (ix) Operational and other feedback/ comments sent by POSOCO to CEA, CERC and PGCIL;
- (x) Data maintained by POSOCO (List of lines, power-flows, outages etc.);

⁸ *Green corridor is a transmission corridor, planned and executed, to evacuate power mainly from renewable sources like wind and solar energy*

(xi) Guidelines/ Decisions of Ministry of Power/ MNRE/ Ministry of Environment & Forest/ CEA etc.; and

(xii) Works & Procurement Policies and Procedures, CVC guidelines etc.

2.4 Audit Methodology

An Entry Conference was held with the Management of PGCIL on 8 May 2018, wherein scope of audit, audit objectives, audit criteria and audit sample were discussed. Field audit was conducted during May 2018 to September 2018 wherein relevant records in PGCIL were examined and discussions were held with the Management. During the course of audit, observations were issued to the Management for their comments. Draft report was issued to the management on 05 November 2018 for their comments. Replies of the management were received on 03 January 2019. Exit Conference was held on 07 January 2019 with the Management of PGCIL. Draft report was issued to the Ministry of Power on 05 February 2019 for their comments. The reply of Ministry was received on 27 June 2019 and Exit Conference with the Ministry was held on 07 January 2020. Minutes of Exit Conference and reply of Ministry have been suitably considered while finalising this draft report.

2.5 Audit Sample and coverage

PGCIL executed 294 projects⁹ during the period 2012-17 through 1,773 contract packages. Sampling was carried out in two stages. In the first stage, projects were selected and in the second stage individual contracts under selected projects were selected. Out of the 294 projects on which capital expenditure of ₹1,09,987.30 crore was incurred during the period 2012-17, 18 high value projects involved capital expenditure of ₹52,599.60 crore (47.82 per cent). Excluding two¹⁰ of these projects which were covered in the earlier Performance Audit and one project¹¹, wherein both planning and award of contract packages was finalised before 12th Plan period(2012-2017), the remaining 15 projects have been selected for examination in the present Performance Audit. Capital expenditure incurred on the 15 projects was ₹46,179.10 crore (41.98 per cent) out of total expenditure of ₹1,09,987.30 crore upto March 2017.

Besides, PGCIL also executed nine transmission projects valuing ₹2,999.70 crore for Renewable Energy through 157 contract packages. Out of nine projects, three high value ongoing projects (Green Energy Corridor projects) with total capital expenditure of ₹2,352.88 crore (78.43 per cent) upto March 2017 have been selected.

⁹ *Other than nine transmission projects for Renewable Energy*

¹⁰ *Transmission System Associated with Mundra Ultra Mega Power Project and Transmission system for Phase I generation Projects in Orissa - Part B*

¹¹ *Common system associated with Coastal Energen Private Limited and Ind-Barath Power (Madras) Limited LTOA Generation Projects in Tuticorin Area (Part-B)*

Thus, the total sample of selected 18 projects¹² constitutes 42.95 *per cent* of the total population in terms of value and 5.94 *per cent* in terms of number of projects¹³. List of 18 projects selected is given in *Annexure I*. Fifteen of these projects were completed while three projects were on-going as on December 2018.

Further, 326 contracts¹⁴ were awarded for erection of the above 18 projects out of which, 120 contracts¹⁵ had been selected by adopting Stratified Random sampling using IDEA software.

2.6 Audit findings

Audit findings are discussed in the subsequent chapters under the following headings:

Chapter 3: Planning of Transmission System.

Chapter 4: Project Execution and Utilisation of Completed lines.

Chapter 5: Project Monitoring. and

Chapter 6: Conclusion and Recommendations.

2.7 Acknowledgement

The cooperation extended by the Management of PGCIL and Ministry of Power in facilitating smooth conduct of the performance audit is appreciated and acknowledged.

¹² 3 renewable energy projects and 15 other projects

¹³ In the earlier Performance Audit, 20 projects were selected which constituted 37 per cent in terms of value and 14 per cent in terms of number of projects planned and executed by PGCIL during April 2007 and March 2012

¹⁴ 86 for renewable energy and 240 for other projects

¹⁵ 32 for green energy and 88 for other projects

